

WHAT IS CLAIMED IS:

1. A fuser member for a toner fusing system, comprising:

- (a) a fuser base; and
- (b) a fusing surface layer comprising;
 - (i) a fluoroelastomer; and
 - (ii) nonfibrillatable and autoadhesive plastic particles, comprising at least about 25 percent by volume of the fusing surface layer.

2. The fuser member of claim 1, wherein the nonfibrillatable and autoadhesive plastic particles are dispersed at least essentially uniformly in the fusing surface layer.

3. The fuser member of claim 1, wherein the nonfibrillatable and autoadhesive plastic particles have a mean particle diameter of from about 0.1 microns to about 20 microns.

4. The fuser member of claim 3, wherein the nonfibrillatable and autoadhesive plastic particles comprise at least about 35 percent by volume of the fusing surface layer.

5. The fuser member of claim 1, wherein the plastic comprises a fluororesin.

6. The fuser member of claim 5, wherein the fluoro-resin comprises a member selected from the group consisting of copolymers of tetrafluoroethylene and hexafluoropropylene and copolymers of tetrafluoroethylene and ethylene.

7. The fuser member of claim 5, wherein the fluoro-resin comprises a member selected from the group consisting of polytetrafluoroethylenes, fluorinated ethylene propylenes, and copolymers of tetrafluoroethylene and perfluoroalkyl vinyl ether.

8. The fuser member of claim 7, wherein the fluoro-resin comprises a polytetrafluoroethylene having a molecular weight of from about 25,000 to about 250,000.

9. The fuser member of claim 8, wherein the polytetrafluoroethylene comprises up to about 5 mole percent of at least one additional monomer.

10. The fuser member of claim 8, wherein the nonfibrillatable and autoadhesive polytetrafluoroethylene particles have a mean particle diameter of from about 0.1 microns to about 20 microns.

11. The fuser member of claim 8, wherein the nonfibrillatable and autoadhesive polytetrafluoroethylene particles comprise at least about 35 percent by volume of the fusing surface layer.

12. The fuser member of claim 11, wherein the nonfibrillatable and autoadhesive polytetrafluoroethylene particles comprise from about 43 percent by volume to about 60 percent by volume of the fusing surface layer.

13. The fuser member of claim 8, wherein the fusing surface layer comprises at least about 100 parts of nonfibrillatable and autoadhesive polytetrafluoroethylene particles per 100 parts by weight fluoroelastomer.

14. The fuser member of claim 8, wherein the fusing surface layer further comprises a discontinuous phase dispersed through the fluoroelastomer continuous phase in the form of domains, the discontinuous phase comprising a polymer.

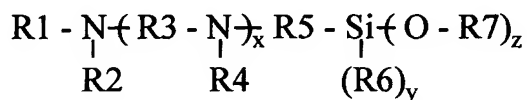
15. The fuser member of claim 14, wherein the polymer comprises an elastomer selected from the group consisting of silicones, perfluoropolyethers, and fluoroelastomers.

16. The fuser member of claim 15, wherein the elastomer comprises a silicone.

17. The fuser member of claim 16, wherein the domains comprise silicone elastomer particulate.

18. The fuser member of claim 17, wherein the silicone elastomer particulate comprise a core-shell configuration, comprising a silicone resin shell surrounding elastomer core.

19. The fuser member of claim 18, wherein the silicone elastomer particulate comprising a core-shell configuration has been prepared by surface treatment, of silicone elastomer particulate, with an aminosilane to provide the shell portion of the core-shell configuration, the aminosilane having the formula



wherein

R^1 and R^2 are the same or different, and are selected from the group consisting of hydrogen and $\text{C}_1\text{-C}_8$ hydrocarbyl groups;

R^3 is a C_1-C_8 hydrocarbyl group;
 R^4 is selected from the group consisting of hydrogen and C_1-C_6 hydrocarbyl groups;
 R^5 is a C_3-C_8 hydrocarbyl group;
 R^6 and R^7 are the same or different, and are selected from the group consisting of C_1-C_8 hydrocarbyl groups;
 x is 0 to 2;
 y is 0 to 2;
 z is 1 to 3; and
 $y + z$ is 3.

20. The fuser member of claim 17, wherein the silicone elastomer particulate has a mean particle diameter of from about 0.2 microns to about 40 microns.

21. The fuser member of claim 20, wherein the silicone elastomer particulate comprises from about 10 parts to about 100 parts per 100 parts by weight of the fluoroelastomer.

22. The fuser member of claim 21, wherein, at the temperature of the fusing process, the silicone elastomer particulate has a modulus of from about 0.8×10^6 Pa to about 8×10^6 Pa.

23. The fuser member of claim 15, wherein the discontinuous phase has been prepared from a curable polyfunctional poly(C_{1-6} alkyl) siloxane polymer.

24. The fuser member of claim 23, wherein the curable polyfunctional poly(C_{1-6} alkyl) siloxane polymer comprises a

silanol- or trimethylsilyl-terminated polymethylsiloxane, and is a liquid blend comprising about 60-80 weight percent of a difunctional polydimethylsiloxane having a number average molecular weight of about 150,000, and 20-40 weight percent of a polytrimethylsilyl silicate resin having monofunctional and tetrafunctional repeating units in an average ratio of between about 0.8 and 1 to 1, and having a number average molecular weight of about 2,200.

25. The fuser member of claim 23, wherein the curable polyfunctional poly(C₁₋₆ alkyl) siloxane polymer comprises up to about 60 parts per 100 parts by weight of the fluoroelastomer.

26. The fuser member of claim 25, wherein, at the temperature of the fusing process, the discontinuous phase has a modulus of from about 0.8×10^6 Pa to about 8×10^6 Pa.

27. A composition comprising:

(a) a fluoroelastomer composition, comprising a fluoroelastomer;

(b) nonfibrillatable and autoadhesive plastic particles; and

(c) nonaqueous solvent;

whereby water is at least essentially absent from the composition.

28. The composition of claim 27, wherein the plastic comprises a fluororesin, and wherein the nonfibrillatable and autoadhesive fluororesin particles are wettable by the nonaqueous solvent.

29. The composition of claim 27, wherein the plastic comprises a polytetrafluoroethylene having a molecular weight of from about 25,000 to about 250,000.

30. The composition of claim 27, further comprising a curative.

31. The composition of claim 30, wherein the curative comprises a bisphenol curing system, the bisphenol curing system comprising a bisphenol crosslinking agent and an accelerator.

32. The composition of claim 27, wherein the fluoroelastomer composition further comprises a cocurative.

33. The composition of claim 32, wherein the cocurative comprises at least one member selected from the group consisting of MgO and ZnO.

34. The composition of claim 27, wherein the nonaqueous solvent comprises at least about 80 percent by weight of an acetate.

35. The composition of claim 34, wherein the acetate comprises at least one member selected from the group consisting of C₁-C₈ acetates.

36. The composition of claim 34, wherein the solvent further comprises MeOH.

37. The composition of claim 27, further comprising silicone elastomer particulate.

38. The composition of claim 27, further comprising a curable polyfunctional poly(C₁₋₆ alkyl) siloxane polymer.

39. The composition of claim 38, further comprising an α,ω difunctional polydiorganosiloxane oligomer.

40. The composition of claim 27, comprising a coating composition for forming a layer of an article, wherein the amount of nonfibrillatable and autoadhesive plastic particles is sufficient for the coating composition to form a layer comprising at least about 25 percent by volume of the nonfibrillatable and autoadhesive plastic particles.

41. The composition of claim 40, wherein the amount of nonfibrillatable and autoadhesive plastic particles is sufficient for the coating composition to form a layer comprising at least about 35 percent by volume of the nonfibrillatable and autoadhesive plastic particles.

42. A process for preparing a composition, comprising:

(a) separately adding, to solvent, materials comprising:

(i) a fluoroelastomer composition, comprising a fluoroelastomer; and

(ii) nonfibrillatable and autoadhesive plastic particles; and

(b) mixing the result of the addition under high shear.

43. The process of claim 42, wherein the plastic comprises a fluororesin, and wherein the nonfibrillatable and

autoadhesive fluoro-resin particles are wettable by the solvent.

44. The process of claim 42, comprising either:

(a) adding the fluoroelastomer composition to the solvent before adding the nonfibrillatable and autoadhesive plastic particles to the solvent; or

(b) adding the nonfibrillatable and autoadhesive plastic particles to the solvent before adding the fluoroelastomer composition to the solvent.

45. The process of claim 42, wherein the plastic comprises a polytetrafluoroethylene having a molecular weight of from about 25,000 to about 250,000.

46. The process of claim 42, wherein the materials separately added to the solvent further comprise a curative.

47. The process of claim 46 wherein the curative comprises a bisphenol curing system, the bisphenol curing system comprising a bisphenol crosslinking agent and an accelerator.

48. The process of claim 46, wherein the fluoroelastomer composition further comprises a cocurative.

49. The process of claim 48, wherein the cocurative comprises at least one member selected from the group consisting of MgO and ZnO.

50. The process of claim 42, wherein the solvent is nonaqueous solvent, whereby water is at least essentially absent from the composition.

51. The process of claim 42, wherein the solvent comprises at least about 80 percent by weight of an acetate.

52. The process of claim 51, wherein the acetate comprises at least one member selected from the group consisting of C₁-C₈ acetates.

53. The process of claim 51, wherein the solvent further comprises MeOH.

54. The process of claim 42, wherein the materials separately added to the solvent further comprise silicone elastomer particulate.

55. The process of claim 42, wherein the materials separately added to the solvent further comprise a curable polyfunctional poly(C₁₋₆ alkyl) siloxane polymer.

56. The process of claim 42, wherein the materials separately added to the solvent further comprise an α,ω difunctional polydiorganosiloxane oligomer.

57. The process of claim 42, wherein the composition comprises a coating composition for forming a layer of an article, and wherein the amount of nonfibrillatable and autoadhesive plastic particles added to the solvent is sufficient for the coating solution to form a layer comprising at least about 25 percent by volume of the nonfibrillatable and autoadhesive plastic particles.

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58. The process of claim 57, wherein the amount of nonfibrillatable and autoadhesive plastic particles added to the solvent is sufficient for the coating solution to form a layer comprising at least about 35 percent by volume of the nonfibrillatable and autoadhesive plastic particles.